

ABSTRACT

To provide a highly efficient permanent magnet motor which can reduce armature reaction flux, improve magnetic flux distribution in an outer core, and thereby reduce noise and vibration.

A permanent magnet motor has permanent-magnet-holding slots 5 formed in those parts of a rotor core 2A which correspond to sides of an approximately regular polygon centered on an axis of the rotor core 2A, permanent magnets 4 inserted in the respective permanent-magnet-holding slots, and four or more radially elongated slits 6 arranged apart from each other along each of the permanent-magnet-holding slots on an outer core outside the permanent-magnet-holding slots, characterized in that at a radially outer end, the slits are spaced approximately equally while at a radially inner end, spacing between the slits is reduced with increasing distance from a center of each permanent magnet, with the spacing at the center being the largest.